WHAT IS CLAIMED IS:

1. A variable valve operating system for an internal combustion engine with at least two cylinder banks comprising:

a variable valve-lift and working-angle control mechanism that changes at least one of a valve lift and a working angle of each of engine valves arranged in each of the cylinder banks;

at least two variable valve timing control mechanisms provided for each of the cylinder banks, for changing a valve timing of each of the engine valves arranged in one bank of the cylinder banks and a valve timing of each of the engine valves arranged in the other bank independently of each other; and

a control unit configured to be electronically connected to the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms for responding a failure in one of the variable valve timing control mechanisms for failsafe purposes; the control unit comprising:

a first failsafe section capable of executing a first failsafe operating mode in which at least one of the valve lift and the working angle of each of engine valves is increasingly compensated for by the variable valve-lift and working-angle control mechanism, when the one variable valve timing control mechanism is failed.

2. The variable valve operating system as claimed in claim 1, wherein:

the control unit further comprises:

a second failsafe section capable of executing a second failsafe operating mode in which a valve timing of an unfailed variable valve timing control mechanism of the

variable valve timing control mechanisms is compensated for and brought closer to a valve timing of the failed variable valve timing control mechanism.

3. The variable valve operating system as claimed in claim 1, wherein:

the variable valve-lift and working-angle control mechanism comprises a high-speed-cam and low-speed-cam switching system equipped with a high-speed cam having a predetermined large valve-lift and working-angle characteristic and a low-speed cam having a predetermined small valve-lift and working-angle characteristic, for varying both of the valve lift and the working angle by switching from one of the high-speed cam and the low-speed cam to the other;

the variable valve-lift and working-angle control mechanism initiates switching from the low-speed cam to the high-speed cam when the one variable valve timing control mechanism is failed, and holds a high-speed cam operating mode when switching to the high-speed cam has already been made.

4. The variable valve operating system as claimed in claim 2, further comprising:

a hydraulic pressure source, which is common to the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms, for hydraulically operating the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms; and

wherein the first and second failsafe operating modes are both executed under a condition where the one variable valve timing control mechanism is failed and a pressure level of

hydraulic pressure discharged from the hydraulic pressure source is greater than or equal to a first threshold value.

5. The variable valve operating system as claimed in claim 4, wherein:

the control unit further comprises:

a third failsafe section capable of executing a third failsafe operating mode in which hydraulic pressure supply to the unfailed variable valve timing control mechanism is inhibited under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the first threshold value and greater than or equal to a second threshold value.

6. The variable valve operating system as claimed in claim 5, wherein:

the control unit further comprises:

a fourth failsafe section capable of executing a fourth failsafe operating mode in which hydraulic pressure supply to the variable valve-lift and working-angle control mechanism is inhibited and the unfailed variable valve timing control mechanism is adjusted to a maximum timing-retard position under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the second threshold value and greater than or equal to a third threshold value.

7. The variable valve operating system as claimed in claim 6, wherein:

the control unit further comprises:

a fifth failsafe section capable of executing a fifth failsafe operating mode in which hydraulic pressure supply to the variable valve-lift and working-angle control mechanism and hydraulic pressure supply to the unfailed variable valve timing control mechanism are both inhibited under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the third threshold value.

8. A variable valve operating system for an internal combustión engine comprising:

a variable valve-lift and working-angle control mechanism that changes at least one of a valve lift and a working angle of each of engine valves;

at least two variable valve timing control mechanisms that change valve timings independently of each other; and

a control unit configured to be electronically connected to the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms for responding a failure in one of the variable valve timing control mechanisms for failsafe purposes; the control unit comprising:

a first failsafe section capable of executing a first failsafe operating mode in which at least one of the valve lift and the working angle of each of engine valves is increasingly compensated for by the variable valve-lift and working-angle control mechanism, when the one variable valve timing control mechanism is failed.

9. A variable valve operating system for an internal combustion engine with at least two cylinder banks comprising:

a variable valve-lift and working-angle control mechanism that changes at least one of a valve lift and a working angle of each of engine valves arranged in each of the cylinder banks;

at least two variable valve timing control mechanisms provided for each of the cylinder banks, for changing a valve timing of each of the engine valves arranged in one bank of the cylinder banks and a valve timing of each of the engine valves arranged in the other bank independently of each other; and

a control unit configured to be electronically connected to the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms for responding a failure in one of the variable valve timing control mechanisms for failsafe purposes; the control unit comprising:

malfunction detection means for determining whether one of the variable valve timing control mechanisms is failed; and

failsafe means for executing a failsafe operating mode in which at least one of the valve lift and the working angle of each of engine valves is increasingly compensated for by the variable valve-lift and working-angle control mechanism, when the one variable valve timing control mechanism is failed.

10. A method of executing failsafe functions for a variable valve operating system for a multi-bank internal combustion engine employing a variable valve-lift and working-angle control mechanism changing at least one of a valve lift and a working angle of each of engine valves arranged in each of cylinder banks, and at least two variable valve timing control mechanisms provided for each of the cylinder banks

for changing a valve timing of each of the engine valves arranged in one bank of the cylinder banks and a valve timing of each of the engine valves arranged in the other bank independently of each other, the method comprising:

detecting whether one of the variable valve timing control mechanisms is failed; and

executing a first failsafe operating mode in which at least one of the valve lift and the working angle of each of engine valves is increasingly compensated for by the variable valve-lift and working-angle control mechanism, when the one variable valve timing control mechanism is failed.

11. The method as claimed in claim 10, further comprising:

detecting a first phase of a cam-angle sensor signal output associated with the failed variable valve timing control mechanism and a second phase of a cam-angle sensor signal output associated with an unfailed variable valve timing control mechanism of the variable valve timing control mechanisms;

determining that the one variable valve timing control mechanism is failed when a phase difference between the first and second phases exceeds a predetermined reference value;

executing a second fail-safe operating mode in which a valve timing of the unfailed variable valve timing control mechanism is compensated for and brought closer to a valve timing of the failed variable valve timing control mechanism, when the one variable valve timing control mechanism is failed.

12. The method as claimed in claim 11, further comprising:

hydraulically operating the variable valve-lift and working-angle control mechanism and the variable valve timing control mechanisms by a common hydraulic pressure source, and wherein:

the first and second failsafe operating modes are both executed under a condition where the one variable valve timing control mechanism is failed and a pressure level of hydraulic pressure discharged from the hydraulic pressure source is greater than or equal to a first threshold value.

13. The method as claimed in claim 12, further comprising:

executing a third failsafe operating mode in which hydraulic pressure supply to the unfailed variable valve timing control mechanism is inhibited under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the first threshold value and greater than or equal to a second threshold value.

14. The method as claimed in claim 13, further comprising:

executing a fourth failsafe operating mode in which hydraulic pressure supply to the variable valve-lift and working-angle control mechanism is inhibited and the unfailed variable valve timing control mechanism is adjusted to a maximum timing-retard position under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the second threshold value and greater than or equal to a third threshold value.

15. The method as claimed in claim 14, further comprising:

executing a fifth failsafe operating mode in which hydraulic pressure supply to the variable valve-lift and working-angle control mechanism and hydraulic pressure supply to the unfailed variable valve timing control mechanism are both inhibited under a condition where the one variable valve timing control mechanism is failed and the pressure level of hydraulic pressure discharged from the hydraulic pressure source is less than the third threshold value.

16. A method of executing failsafe functions for a variable valve operating system for an internal combustion engine employing a variable valve-lift and working-angle control mechanism changing at least one of a valve lift and a working angle of each of engine valves, and at least two variable valve timing control mechanisms changing valve timings independently of each other, the method comprising:

detecting whether one of the variable valve timing control mechanisms is failed; and

executing a first failsafe operating mode in which at least one of the valve lift and the working angle of each of engine valves is increasingly compensated for by the variable valve-lift and working-angle control mechanism, when the one variable valve timing control mechanism is failed.